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Mexico and U. S. Start Screwworm Field Studies:

Coordinated field studies of the screwworm, a serious livestock pest, have been organized by Mexico and the United States, the U. S. Department of Agriculture announced today. The joint effort is part of the Mexican-United States program of cooperation discussed by President Eisenhower and the President of Mexico, Adolfo Lopez Mateos, at Acapulco, Mexico, last February.

Personnel assigned by USDA's Agricultural Research Service are working with Mexico and southwestern States to make a survey for screwworms in northern Mexico and in Louisiana, Texas, New Mexico, Arizona, and California. Purpose of the survey is to learn more about the habits of the screwworm fly there, and to determine if the new method of combating the screwworm, now being used in southeastern United States, can be applied in Mexico and the Southwest.

The method involves use of radioactive cobalt to make laboratory-reared screwworm flies sterile. When sterile male flies are dispersed in large numbers over infested areas they mate with the native female flies and thereby prevent them from producing fertile eggs.

Screwworms survive the winter in Florida and in warm areas of the Southwest and Mexico. The surveys will serve to determine where the screwworm overwinters in the Southwest and Mexico and how terrain and climate or other natural factors affect the habits of the fly there.

Other information to be obtained includes the number and kinds of animals attacked and the relative abundance of infestations during each season of the year. The information will be correlated with topography and climate to reveal any pattern of the fly's habits that will make it susceptible to the sterile fly method of combating the pest. Until such information is available, feasibility of using the method cannot be evaluated reliably.

Large size of the infested area. The average overwintering area of the screwworm includes about 70,000 square miles of Texas, 40,000 square miles in California, 34,000 square miles in Arizona, and 1,000 square miles in New Mexico, plus several hundred thousand square miles in adjacent Mexico. By contrast, the average overwintering area in southeastern United States is less than 50,000 square miles.

Lack of natural barriers to screwworm spread. Screwworms were reported at elevations of 8,000 feet in Mexico and 6,000 feet in the United States -- suggesting that existing mountain ranges do not provide natural barriers to the movement of this pest. Numerous valleys through the mountain ranges form corridors that facilitate migration. This contrasts with the situation in the Southeast where the ocean and gulf are extensive fly-free boundaries of the eradication area, providing an effective natural barrier against reinfestation.

Long-range aspects of a screwworm program. Efforts to protect the United States and adjacent areas of Mexico from infestation from farther south would necessitate establishing some type of permanent buffer zone. On the basis of present knowledge, it appears that sterile flies would have to be continually reared and released in this zone along with appropriate inspections and control of livestock movements.

Screwworm infestations. The survey data showed that the majority of screwworm cases in the Southwest and Mexico occurred in navels of newborn animals and in man-made wounds, such as castration, dehorning, shear cuts, branding, and ear-marking. Excessively dry and excessively wet climates limit buildup of infestations.

The screwworm fly, Callitroga hominivorax (Cqrl.), a little larger than the house fly, attacks only the flesh of living, warm-blooded animals. The fly lays eggs in masses around the edges of wounds. The maggots or screwworms, hatching from the eggs, bury themselves headfirst in the wound, gouging out pockets by their feeding. An untreated wound may kill an animal in 10 days -- hence, the necessity of constant inspection of animals in the infested area to detect and treat all infestations. This close supervision of livestock is expensive in range areas. In spring and summer, the fly extends its range into large areas of southwestern United States, and through livestock shipments, as far north as the Dakotas. However, the pest overwinters only in relatively warm areas.

Status of work in southeastern States. Due to satisfactory progress in eradicating the screwworm in the Southeast, Nov. 14 has been set as the date for closing the facilities located at Sebring, Fla., for production of flies used in the program. Dispersal of sterile flies will be discontinued by that time, also. The building and equipment will be maintained on a standby basis but all flies used as breeding stock will be destroyed. If it is necessary to resume operations in the Southeast, stock for a new fly colony can be obtained from a USDA research laboratory at Kerrville, Texas.